A Brief Survey of Methods to Analyze Human Decisions for Infrastructure Resilience Applications

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Abstract— **The problems faced by those seeking infrastructure resilience are complex. Human decisions are often the lynchpin. A large number of analytic methods have been proposed to study the various aspects of human decision-making relevant for infrastructure resilience. Is there a good way to understand how these potential analytic methods compare, contrast, and possibly fit together? According to INFORMS, analytics is "the scientific process of transforming data into insight for making better decisions." Major categories of analytic methods identified by INFORMS include simulation; optimization; and probability and statistics. This talk will briefly survey a range of analytic methods that have potential relevance to modeling human decision making for infrastructure resilience applications including succinctly comparing the methods' varying strengths and weaknesses.**

Keywords—analytics; human dimensions; infrastructure resilience

ACKNOWLEDGMENT

Argonne National Laboratory's work was supported under U.S. Department of Energy contract DE-AC02-06CH11357.